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ORIGINAL LECTURES.

CLINICAL LECTURE

ON A CASE OF SUPPOSED LESION OF THE POSTERIOR PORTION OF THE INTERNAL CAPSULE.

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Reported by Dr. CHARLES K. MILLS, Chief of Clinic for
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GENTLEMEN,—The chief interest in the case which I now bring before you is centred in the localization of the lesion. I will first read you a history of the case, and then briefly discuss this question.

W. B., æt. 58, a house-carpenter, on the 6th of August, 1877, a hot day, had been sitting on a bench eating his dinner, and, on attempting to get up, suddenly lost power in the left leg, and fell. He did not become unconscious, but could not regain his feet for half an hour, and during this time he had a tendency, which he could not resist, to roll around on the ground. When he would try to straighten himself, he would roll over again in spite of his efforts. At the same time he had peculiar giddy feelings in the head. In about half an hour he became able to keep on his feet, and, with the assistance of a friend, came to the University Dispensary for Nervous Diseases, a distance of three blocks from the spot where he was attacked. He complained of dull pain and dizziness, and a frequent inclination to fall. He was quite lame in the left leg, and the partial loss of power had also extended to the left arm. He had a decided feeling of numbness in the entire left side,—face, arm, body, and leg,—the sensation being most marked in the left lower extremity, below the knee. In walking he felt as if he was not touching the ground with his left foot, with which he was afraid to step out. Examination with the æsthesiometer and a faradic current showed marked loss of sensation on the left side, especially in the foot. Farado-contractility was retained. The special senses were not at this time examined.

For four weeks before the attack just described the patient had suffered with a dull pain in the head. The only other history that could be obtained was that for twenty-five years he had been addicted to venereal excess. He denied abuse of alcohol and syphilis.

For two months after August 6, 1877, he continued to report at intervals of about a week. His vertigo gradually disappeared,

apparently, under the use of bromide of potassium and derivatives. The anæsthesia of the left side improved, but did not entirely leave. It remained most marked and persistent in the foot and leg below the knee. He thought that faradization with the metallic brush greatly benefited the numbness. The motor paresis improved so much that it was no longer noticeable. The man resumed his work as a carpenter. An interesting fact noticed by him was that for a couple of weeks, when he would perspire at his work, the perspiration would be unilateral, being limited to the *right* half of the body. He said that "he did not sweat at all on the left side."

The patient was lost sight of from the autumn of 1877 until January 28, 1879, when he again returned to the University Dispensary for Nervous Diseases. He stated that during the fifteen months of his absence he had been able to work, but he had not had his usual strength and endurance. His memory was good, but his mind seemed somewhat dulled. During the three or four months preceding his return he thought that he had been failing in health.

He was now once more examined, and his condition noted, as follows:

No facial or ocular paralysis was present. All movements of the upper and lower extremities of both sides were preserved, but the left foot and leg were moved more clumsily and with less vigor than the right. The grip of each hand was good. He complained of a constant sensation of numbness in his left foot, and said that when he attempted to lift it it felt as if it weighed three or four hundred pounds. His bowels and bladder were normal. He said that he had the sensation of a band below the left knee and around the left ankle. He also had the "pins-and-needles" sensation in the upper part of the left leg, and in the left arm from the elbow to the hand.

Examination with the æsthesiometer, and with a faradic current, showed slight anæsthesia of the left side of tongue and face, and left arm, forearm, and hand; anæsthesia of the left foot and leg, especially below the knee, was much more marked. Taste was abolished on the left anterior aspect of the tongue. Smell was also defective on the left side.

Dr. W. M. L. Zeigler, Chief of the University Ear Clinic, reported that, after a close examination, no evidence of external or internal ear trouble could be discovered. He could find nothing to account for loss of hearing, and yet the hearing of the left ear was markedly defective; he could only distinguish the tick of the watch when the latter was in contact with the ear, and he could not hear it as well this way as it could be heard on the other side.

His eyes were examined by Prof. William

F. Norris, to whom I owe the following interesting report:

Right Eye.—He has only perception of light. The disc is seven diameters (seven times the diameter of the retinal veins); there is broadening of the scleral ring all around, and a central excavation. A slight hemorrhage is seen on the disc, near its outer portion. The upper branch of the central artery of the retina is apparently empty; it is visible as a white cord. At some places there is a suspicion of the walls of the vessels being seen inside. The lower branch of the retinal artery is seen immediately below the disc, veiled by its sheath; at other points it is visible as a white cord. The upper branch of the nasal artery is visible. The veins are full of blood. Large clots of blood are plainly visible in the vitreous, with a convex $\frac{1}{8}$. Black splotches and light lines, corresponding to choroidal veins, are seen. Near the macula, along some of the veins, are manifest hemorrhages, which here and there envelop the vein, and make it appear swollen in some places and shrunken in others.

Left Eye.—Vision = $\frac{20}{60}$, or one-fifth of the normal acuity. The disc is smaller than that of right eye, being six diameters. It has a central excavation. The arteries and veins are in normal proportion, but all a little prominent, bending down over the edge of the disc; both are tortuous and coarse. A conus is present on the edge of the disc, with a pigment-loop around it of the width of the retinal veins. The sheath on the lower vein is visible as a white line beyond the disc. In other respects the vessels appear as usual. No vitreous opacities are seen. The central-color perception in this left eye is diminished to about one-fifth of the normal. Peripheral-color perception is markedly shrunken. No central scotoma.

The refraction of each eye equals $-\frac{1}{8}$.

His heart was sensibly enlarged. The aortic second sound was intensified so as to be heard over any portion of the chest; otherwise the sounds were normal. His lungs were slightly emphysematous.

I have thus, gentlemen, in some detail, given you the history of this interesting case. The last notes which I have read to you were made within a few days, but I will examine the patient before you in regard to the most important points. [The patient was now examined before the class for motor power, sensibility, sight, hearing, taste, smell, etc., with results corresponding to those given in the prepared notes.]

You have, in brief, the history of a sudden cerebral seizure, coming on in a man in fair health, who, however, had previously had some dull headache. The at-

tack caused him to fall, but did not produce unconsciousness. It brought on immediately a peculiar vertigo, with a tendency to rolling movements, and it left him with a temporary hemiparesis (real or apparent), and a more permanent hemianæsthesia, with impairment of the special senses of the same side.

Where is the lesion which has produced this train of symptoms? Evidently it is not in the spinal cord. The disturbances of the special senses of sight, hearing, smell, and taste, and the fact that the symptoms are mainly unilateral, involving the face as well as the body, lead me at once to exclude the cord as the probable seat of disease.

Presuming, therefore, that the lesion is cerebral, where would it most probably be located? A lesion of the posterior strands of the internal capsule or peduncular expansion of the right crus cerebri would account satisfactorily for most of the symptoms. Veyssière performed experiments—which have been confirmed by Carville and Duret, by Raymond, and others—in which this set of fibres was ingeniously divided. Cutaneous anæsthesia of the opposite side resulted. Facts have been published, also, to show that impairment of the special senses of smell, taste, hearing, and sight accompanied the hemianæsthesia which is produced by a section of this kind. A remarkable contraction of the field of vision and difficulty in discriminating colors have been particularly observed. Recently, moreover, experiments have been performed which go to show that when these posterior fibres of the crus are cut across, disorders of movement result comparable to those which this man describes as having occurred immediately after his attack.

We have, then, physiological and pathological facts which lead up to a tolerably clear explanation of this case. The condition of the color-field of the left eye is such as you would expect to find from this peduncular lesion, or from a partial disorganization of the visual centres of the cortex.

It is probable that the condition of the right eye was not due to the same lesion which gave rise to the left unilateral symptoms. The appearances of the retinal artery pointed to occlusion. If the main cerebral lesion was thrombosis or embolism, it is probable that similar causes had

led to a blocking of the vessels going to the eye. It is true, however, as Landolt has pointed out, that in cases of cerebral hemianæsthesia interference with vision is not altogether unilateral.

The unilateral sweating which was present for two weeks is worthy of consideration. The sweating occurred on the right side, the anæsthetic symptoms being present on the left. The central condition may have been such as to interfere with the passage of impressions of vaso-motor centres, if such exist.

If the lesion is not situated in the posterior part of the right cerebral crus (which I think most probable), the combination of sensory phenomena presented can, I think, be accounted for only on the supposition of an extensive lesion of the cerebral cortex, involving the major portion of the sensory or perceptive zone.

The well-known experiments of Ferrier seem to show that the areas which preside over the special senses and common sensation occupy adjoining portions of the parietal, temporo-sphenoidal, and occipital lobes. Stimulation and destruction of these districts produced various interferences with sensation and the special senses, such as anæsthesia, blindness, deafness, etc.

Pathological data bearing upon the question of the sensory or perceptive regions of the cortex have not been supplied in nearly as great abundance as those in regard to the motor centres. It may be, however, as suggested by Ferrier, that cases are not studied as carefully in regard to sensory as in respect to motor phenomena, the latency being in observation rather than in symptoms.

On the view that the lesion was one limited to the posterior third of the internal capsule, the hemianæsthesia and loss or impairment of the special senses are due to an interruption of the paths of transmission to the sensory centres of the cortex; on the other supposition, you must suppose a destruction, more or less complete, of these cortical centres themselves.

As to the nature of the lesion, we can only conjecture. If it involved the fibres of the crus, it was most likely a small clot; if it was cortical, the chances are in favor of thrombosis or embolism. Examination of the heart did not disclose a cardiac murmur, although the aortic second sound

was loud and ringing in character. A circumscribed meningo-encephalitis might also perhaps account for the case.

ORIGINAL COMMUNICATIONS.

KOLPO-CYSTOTOMY.

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(Read before the Philadelphia County Medical Society,
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BY the term Kolpo-cystotomy (derived from *κολπος*, the vagina, *κυστις*, the bladder, and *τεμνω*, to cut) is meant a division by surgical operation of the septum between the bladder and vagina. It may be done for the extraction of a vesical calculus or foreign body in the bladder, or in cases of irritable bladder or chronic cystitis to give constant exit to the urine and thus secure rest to the bladder.

The operation may be done with the knife, the scissors, or the cautery. The best position in which to place the patient is upon her back, with the thighs strongly flexed upon the abdomen, and held there either by assistants or by bandages or other apparatus. In this position, if the duck-bill speculum be placed in the vagina and the perineum retracted, the urethra, bladder, and uterus will descend close to the vulva, and any operation may be done with almost as much facility as upon any part on the exterior of the body.

If the operation is to be done with the knife or scissors, a large grooved staff should be introduced along the urethra into the bladder, and the incision made into the groove of the staff at the point of selection. If thought advisable, the urethra may be divided along its whole course from its orifice, and the incision then carried as far along the base of the bladder as may be thought necessary. Any hemorrhage that may occur can be arrested with the ligature or by the application of the cautery. It is much easier to see the point of hemorrhage and arrest it when the whole urethra is laid open, than when the partial operation into the bladder only is done. When a small opening is made into the bladder, hemorrhage may occur to a considerable extent and be concealed in the bladder, and it will at times be difficult to detect the point from which the bleeding proceeds. When, however, the whole ure-

thra is laid open, everything is exposed to view and the bleeding easily arrested. The urethra when thus divided does not flatten out, but on account of the density of its tissues remains like a sinus slit open, the edges gaping about a quarter of an inch apart.

If the operation has been done for the removal of a stone or foreign body in the bladder, the wound should be at once brought together by sutures carried through all the tissues except the mucous membrane of the bladder. A winged gum catheter should then be inserted and allowed to remain in the bladder.

If, however, the operation has been done for the relief of an irritable bladder or for chronic cystitis, and the design is to keep the opening patulous in order to give the bladder rest, then the mucous membranes of the vagina and of the bladder may be stitched together. If this is not done, there is a great tendency for even large openings to contract to a mere point or even to close. If the whole urethra has been laid open from the external opening, there is no tendency to close, but the wound remains as a long, narrow, open fistula, with the lower extremity at the position of the orifice of the urethra.

When the operation is done by the cautery, a piece of ivory about half an inch broad should be inserted along the urethra into the bladder. This will protect the upper wall of the bladder from injury. The cautery knife should be brought to a dull red heat, and the bladder divided by several light touches over the position of the ivory director. If the cautery be too hot there will be some hemorrhage, and if it be kept long in contact with the tissues there will be more sloughing. The best form of cautery is Paquelin's thermo-cautery. It is easily managed, the temperature can be readily maintained, and the instrument is very portable.

One of the conditions for which the operation of kolpo-cystotomy has been recommended is the extraction of a vesical calculus. The operation can be done readily and rapidly, and the stone quickly removed in its totality. These attributes constitute what is ordinarily called a brilliant operation. It must be done with the knife, and not with the cautery. The wound made by the knife can be closed; that made by the cautery must remain open, with all the annoyances of a urinary

fistula. Any hemorrhage can easily be seen and readily controlled by ligature or suture. After the operation, the edges of the wound should be carefully brought together by suture, as in vesico-vaginal fistula, and the bladder kept empty by means of a self-retaining winged catheter. It is of great importance that primary union should be obtained throughout the whole extent of the wound. If this should fail, then follows the dribbling of urine and a vesico-vaginal fistula. There is less reason to expect primary union than under other conditions. The closure of any opening at the base of the bladder is always difficult, and, notwithstanding every care, is often followed by failure, necessitating frequent repetitions of the operation. But these difficulties are increased in cases of vesical calculus, by the irritable condition of the bladder and its intolerance of the presence of any foreign body, even though it be a soft gum catheter. Then again, by the long presence of the stone resting upon the base of the bladder, inflammatory action has taken place, which may be expected to interfere with primary union.

On the other hand, calculi, unless they are very large, may be removed from the female bladder through the dilated urethra. Without the slightest difficulty, the female urethra may be rapidly dilated (even in a child), so as to receive the stone-forceps, and the stone easily extracted; or, if the stone is very large, it may first be broken by the lithotrite, and the fragments rapidly and completely extracted. In a case of mine the patient was only nine years old, and yet, without difficulty, the urethra was dilated so as to receive the stone-forceps, and also my forefinger passed along the handles of the forceps into the bladder. The stone, however, proved very large, and could not be extracted in its totality without injury to the urethra. I then introduced the lithotrite, and broke the stone into fragments, and removed these large pieces which you see in this box. The largest fragment measures one inch and a half by one inch and three-eighths. Notwithstanding the great extent to which this child's urethra was dilated, within a few weeks she was perfectly well, and able to retain her urine without the slightest incontinence.

Or, if thought advisable, the stone can be crushed into small fragments without

dilatation of the urethra, and removed in one sitting, as recommended in the male, as well as female, by Dr. Bigelow. Dr. Bigelow has demonstrated that the bladder is much more tolerant of such prolonged manipulation than was formerly thought possible.

It therefore seems evident that, in cases of vesical calculus, kolpo-cystotomy does not possess advantages over rapid dilatation or lithotripsy. The stone can be more rapidly removed by the knife, but there is greater liability to incontinence of urine, and a tendency to the formation of a vesico-vaginal fistula.

In cases of chronic cystitis, kolpo-cystotomy is resorted to in order to give relief to the pain and straining usually present in these cases, and to prevent retention of urine (which is apt to occur), and to allow the bladder rest, in order that all inflammatory results may subside. The object is to leave an opening for a year or more, through which the urine may flow instead of along the urethra. The operation may be done either by the knife or by the cautery. If done by the knife, precautions must be taken, by stitching the mucous membranes together, or by wearing a double button or canula, to prevent the fistula from contracting or closing; or else the whole urethra should be laid open, when the wound will remain patulous, although it may be lessened in extent by the contraction of the posterior border. If the operation is done by the cautery, there is less tendency to closure of the fistula, although it will often greatly contract. In one case, upon which I operated with the thermo-cautery, the opening, originally large enough to admit the finger, contracted until only a grooved director could be passed.

The dysuria to which women are liable is among the most distressing of maladies. It may exist perfectly independent of all symptoms of inflammation, and, on the other hand, may be one of the symptoms of chronic cystitis. Any means proposing to give relief under these painful conditions is deserving of the most patient study and careful trial. There is a natural tendency to refrain from any serious operation unless absolutely necessary, but the suffering in these cases is so intense and continued that relief must be in some way obtained. It is not only a relief from pain that is demanded. The in-

tensity of the pain leads to frequent and desperate efforts to empty the bladder. The straining efforts induce spasmodic contractions, the patient is unable to pass the urine, and retention occurs. The retained urine and the congestion of the bladder cause or increase cystitis, and in time the inflammation extends along the ureters to the kidneys, and the patient may die from nephritis.

A young unmarried woman, about 25 years of age, came under my care in July, 1873, suffering from chronic cystitis. The dysuria was so severe as to resemble the pain due to the presence of a large and rough calculus. Palliative measures only were employed. For a time a winged gum catheter retained in the bladder gave her great relief. In July, 1874, she began to have symptoms of the formation of a large abscess in the region of the left kidney. In August large quantities of pus with a fetid odor were passed from the bladder. She died September 20, 1874.

Under these circumstances of intense suffering, extending through years, and liable at any time to be followed by conditions dangerous to life, even the most serious surgical operation would become justifiable. The operation proposed, however, is not dangerous to life, and is only followed by the annoyances of a vesico-vaginal fistula. Kolpo-cystotomy is easily performed, gives rest to the irritated bladder, prevents retention of urine, and greatly lessens the probability of the inflammation extending to the kidney. These great advantages far outweigh the inconveniences of a vesico-vaginal fistula for one or more years. In proper cases, therefore, kolpo-cystotomy ought to be resorted to without hesitation.

What are the proper cases?

In February, 1877, a patient came to me on account of intense dysuria. She was 22 years of age, and unmarried. In October, 1876, she had a violent attack of pain like passing of a calculus. It lasted several hours, and was followed by more or less constant pain. In December she had another severe attack, and since then has been obliged to resort to opium suppositories for relief. The tendency to urinate was frequent both by day and night, and accompanied by intense pain and great straining. Upon examination, the bladder was found to be nearly free

from evidence of disease, but the uterus was completely retroverted. Complete relief to all the severe symptoms followed upon the restoration of the uterus and its support by a Hodge lever pessary.

Another patient, 59 years of age, and the mother of eleven children, came under my care in April, 1876. For six months she suffered intensely from painful urination. The pain was so severe and constant as to prevent her from walking, and at times from leaving her bed. She described the sensation as if the bladder and urethra were full of "hot grains of wheat," which she was straining to pass. Upon examination, no calculus was found, and no evidence of disease in the bladder. The uterus was large and prolapsed. She was promptly and perfectly relieved by supporting the uterus by a Hodge pessary.

In such cases as these, where the cause of the disorder can be found and removed, there is no need of other surgical interference. Indeed, kolpo-cystotomy would be worse than useless. The difficulty can be removed not only by simpler measures, but more efficiently and without the annoyances of a fistula, and without the need of a second operation to close the fistula.

In every case, then, in which the cause of the irritable bladder can be found and removed, there is reason to hope for a quick and complete relief, even when the pain is extreme, provided the bladder has not been altered in structure.

If, however, the cause cannot be found, or, having been found, cannot be removed, or if when removed the pain and inflammatory symptoms continue, then, for the relief of the patient, and to protect her from serious dangers to her life, kolpo-cystotomy is to be done.

The following cases will illustrate what are the results of the operation when resorted to in severe cases.

Miss L., 40 years of age, has suffered with pains in the back and in the region of the bladder for more than twenty years. She came under my care in February, 1878. She was then obliged to rise twenty or twenty-five times in the night to urinate. In March the urethra was dilated, under ether, so as to receive the finger. This was followed by great pain and the retention of urine, necessitating the employment of a catheter for several days. No relief followed. In May, kolpo-cystotomy was done by means of Paquelin's thermocautery. The opening was made in the base

of the bladder, large enough to receive the forefinger. The operation was followed by partial relief. The urine came away in part involuntarily, by leakage, but in part was passed by straining. In December the operation had to be repeated and the opening enlarged, on account of the contraction of the orifice. In January calcareous deposits formed upon the ulcerated surfaces of the wound, filling up the opening and causing increased suffering. Nitrate of silver was applied to the wound, and the calcareous deposits ceased to form and the patient began to improve. She is now able to remain in bed all night, and to sleep from three to four hours consecutively, and her pains are very much less.

Miss A., 30 years of age, has suffered with severe dysmenorrhœa from the time her menses first began. For seven years she has suffered greatly with dysuria. The urethra has been frequently dilated and many applications made to the bladder. More than a year ago kolpo-cystotomy was done, and the opening afterwards enlarged, because the urine did not flow freely. She has also been under active treatment at different times for pelvic cellulitis, metritis, and ovarian neuralgia. She came under my care in February, 1879, still suffering with intense dysuria. Urine at times retained. The pain was like that of being pierced by a thousand red-hot needles. The best relief she could obtain was from the injection of hot water into the vagina.

Upon examination, the uterus was found enlarged and anteverted, the bladder and urethra very sensitive to pressure, and the fistula patulous and situated in the base of the bladder. As the neck of the bladder and urethra would not bear the presence of any urine, the urethra was laid open on a director from the external orifice, and the incision carried along the base of the bladder to the fistula. This operation was followed by increased retention of urine. Her person has been for the most part dry, and she passes her urine into a vessel, and with much effort. The wound has now healed, but it is too soon to judge of the effect of the operation.

The most striking peculiarities in these cases are that the operation did not remove the pain and did not prevent the urine from being retained.

First, why did not the operation remove the pain? In my opinion, because the pain in these cases is reflex, and, therefore, due to a disorder in some other part. These cases clearly prove that the pain is not due solely to the presence of the urine in the patient's bladder. The sensations of the patients would seem to indicate that all their sufferings were due to the presence

of the urine in the bladder. But when free exit was given to the urine by an opening in the base of the bladder, the pain and straining continued. In one case the whole urethra and neck of the bladder were laid open. In this case all possibility of any urine remaining in the bladder and irritating its walls was removed, and yet the pain continued. There must be, therefore, some other cause for the pain. In these cases the pain did not cease when the wound was healed, but continued with considerable severity in one case for many months, and was greatly aggravated during the monthly period, and closely associated with pains radiating down the limbs. If it be correct, then, that the pain is in great part reflex, the result of the operation shows still more plainly the importance of finding and removing the cause of this reflex pain before resorting to kolpo-cystotomy, and also the importance of removing the original cause, even after the operation has been done for the relief of the bladder.

Second, why is the urine retained after the fistula has been established? The position and relation of the vagina are such that it is capable of containing and retaining fluids. While reclining upon a bed, and even to a degree when in the upright position, the fluid gravitates towards the uterine instead of the vulvar extremity of the vagina. And the reflex pain and irritability of the vagina cause a spasmodic contraction and closure of the orifice of the vagina. The fluid thus retained is difficult of expulsion, because it must be done almost entirely by the abdominal muscles and diaphragm acting at a great distance and under many disadvantages.

Another point of interest in one case was the tendency, during the progress of cicatrization after the application of the cautery, to the deposit of calcareous matter on the ulcerated surfaces; thus giving ocular demonstration of the probable origin of some incrustations of stone found at times in the vesical walls. It was also very instructive to notice how immediately this tendency ceased upon the application of nitrate of silver.

Bearing the above facts in mind, we can arrive at a more correct estimate of the value of kolpo-cystotomy. We should not expect it to relieve all the pain, and we should not anticipate that the urine will

pass away without any effort; but by it we may expect in time to lessen the pain and do away with many of the dangers of cystitis and nephritis.

CASE OF DOUBLE VAGINA AND DOUBLE UTERUS, WITH IMPERFECT MENSTRUATION.

BY D. F. WOODS, M.D.,

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THE following case possesses great interest, on account of its anomaly and rarity. This was the result of a congenital freak. The gradual development and growth of the uterus on the left side partly obliterated the slower growth of the one on the right. The two impinging upon each other at each menstrual term produced constrictions and inflammations which caused thick exudations of membranes, and these obstructed almost entirely the natural drainings of both uteri. So completely buried up in tissue was the one on the right side that no part of it, not even its os, was known, until the revelations of a *post-mortem*. Had there only been one uterus, the success of treatment would most likely have been assured in a speedy cure. As the history of the case will show, when the drain of the left was clear, the right uterus poured forth a discharge which kept the whole system continually tainted by a pool of menstrual discharge having no outlet, and only removed by absorption.

Some time ago I was summoned to see Miss S., aged 19 years, apparently a muscular, well-developed lady, notwithstanding she bore the countenance of one who had endured much mental and physical suffering, and was somewhat anæmic. Upon inquiry into her history, I learned from her mother that she had been a remarkably healthy child, of a ruddy complexion, of a lively disposition, and knew not what it was to be sick until about the age of puberty; that she had commenced to menstruate at the age of thirteen years, but only a few drops appeared, sufficient to produce a slight *show*. I further learned that this scanty menstruation was accompanied with much pain, and that her periods had been very irregular ever since. At times vicarious hemorrhage from the nose and, less frequently, from the throat had appeared. When this vicarious hemor-

rhage was freest her comfort and relief were greatest.

When I saw her she complained of chills succeeded by fever and perspiration. Her pulse was feeble and rapid, tongue furred; said she loathed food, and had had no appetite for many months. She suffered from nausea, vomiting, and occasional diarrhoea. Her abdomen, back, and pelvic regions were exceedingly sore, so much so that the slightest pressure caused her to cringe. Petechial spots were visible in various places over the abdomen. Boils appeared from time to time on different parts of the back and pubis. This state of things, according to her description, had continued for many months. Upon making an examination per vaginam, I found the canal very sensitive and swollen, so much so that the index-finger could scarcely pass. The cause of this I afterwards discovered in an abscess, situated at the posterior wall of the vagina, which prevented her bowels from being emptied without great pain. At this time she had not had a movement for three days previous, and then she said the pain was very intense. I at once lanced the abscess, drawing therefrom about a gill of purulent fluid containing a soft, shreddy material, more or less adherent to the parietes. It seemed rather the result of circumscribed gangrene than true suppuration, for it had a fetid, gangrenous odor.

I ordered a vaginal wash of a weak solution of carbolic acid and tepid water to be used each day, and constitutionally tonics of quinine and iron with milk punch, leaving her, as she expressed it, "feeling much better." The next morning I was sent for; vomiting had occurred, and she complained of pain in the pelvic region, extending up to the umbilicus; ordered her lime-water and milk, with hot fomentations over the abdomen. This had the desired effect, and she improved slowly.

Some few days after this I made a speculum examination, but could discover, to my surprise, no trace of the os uteri. With the use of a very fine sound I succeeded with difficulty in entering an opening near the region of the os. With a very fine sea-tangle, and afterwards with sponge-tents, I dilated this orifice and discovered the os uteri beyond this opening, chained down, as it were, with fibrous bands reflected over the mouth, concealing it from view and forming a *cul de sac*. The fluids of the

uterus emptied into this, and, the opening being so small, the liquid could not escape. Most of the menstrual fluid being held there was, from time to time, undergoing such changes as to produce the various symptoms of blood-poisoning and pyæmia with which my patient had been suffering for many months, and perhaps years.

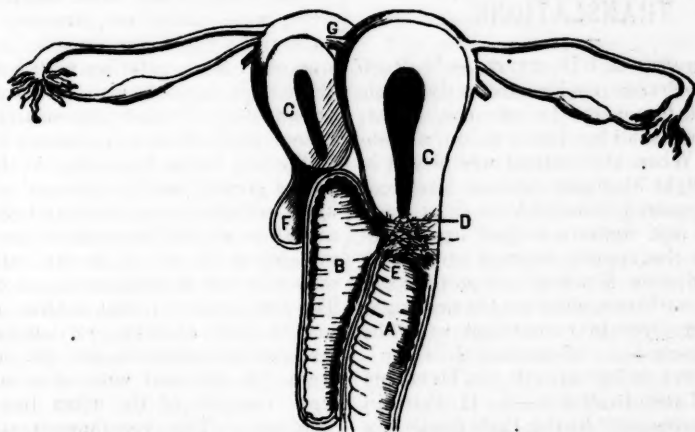
The condition of things being so anomalous, I requested in consultation Dr. R. A. F. Penrose, and afterwards Dr. Ellerslie Wallace. After careful consideration of the case, it was thought advisable to cut away part of the stratum which bound down the os uteri. Accordingly, the patient being put under an anæsthetic, a V-shaped piece was removed, making the passage to the os more complete. The hemorrhage was overcome by the use of a solution of persulphate of iron. After this operation the patient improved rapidly for a time, but still the neck and mouth of the uterus were not free to move, and menstruation was imperfect. About a week after the first consultation (after the operation) the opening into the *cul de sac* before mentioned could be made sufficiently large by stretching to force the index-finger through. Dr. Wallace made the exploration, and discovered a sinus extending down to the inner labia, about four inches in length, on the right side, and gave it as his opinion that it was a false vagina, and not a sinus made by the burrowing of an abscess, as we all had supposed before this exploration. Dr. Penrose and myself, after an examination, verified his diagnosis. Neither of us, however, was able to detect more than a single os uteri. We decided to slit up the partition between this (supposed) false vagina and the true one. This was done by passing a suture of strong cord into the upper opening and bringing it down to the lower part of the anomalous sinus, piercing the wall at its lowest margin. In a few days the cord cut its way through the partition, giving us a chance to inspect carefully the old sinus, and making it plain to each of us that the opinion of Dr. Wallace was correct,—that a congenital false vagina existed without any external opening. This false vagina was a receptacle into which the menstruation was poured each month, undergoing metamorphosis and being, by its decomposition, a "cess-pool," which, from time to time, acted as a blood-poisoning ele-

ment, breaking down the health and producing the various pyæmic symptoms which the patient complained of when I first took charge of her.

After this her health improved. Her menstruation, though painful, came on regularly, but small in quantity and clotted. At a subsequent visit, Dr. Penrose succeeded in introducing a sound to the fundus, proving that there was a distinct passage. The mouth and neck of the uterus were still bound by fibrous adhesions. These we cut, and, after the wounds healed, all the purulent and sanious discharge for a time ceased; the abscesses and petechial patches disappeared; the patient regained her appetite; her cheeks resumed the healthy rose-color; and for several

abscesses reformed, and menstruation was more scanty and difficult; the vicarious hemorrhage from her nose and bronchi increased; altogether she was feeling (as she expressed it) "wretched;" yet to appearance she seemed remarkably healthy. After the incision of the neck of the uterus, its mouth and passage were dilated at various times by an instrument devised for the purpose, and each time this dilatation overcame, in a great measure, the pelvic heaviness and pain, by giving free exit to the uterine discharges.

Although the patient retained her plump and healthful appearance, she continued to suffer almost constantly until her death, which was preceded by days of vomiting and weeks of increased pain.



A, true vagina; B, false vagina; C, C, uteri; D, V-shaped piece removed; E, small opening from true vagina; F, abscess discovered after death; G, opening between the two uteri.

months all her maladies disappeared except the dysmenorrhœa, which she had had from puberty.

So well did she look and seem that it was not necessary to see her professionally for several months. After an interval probably of six months, the hopes of her family and her doctors were blasted by a return of the former grave symptoms. At this juncture Dr. D. Hayes Agnew was called in consultation, and, after careful consideration, it was decided to slit up the anterior neck of the uterus. This gave her some relief for a time, probably incident to the hemorrhage which ensued, draining the uterus, and thus thwarting inflammation, which otherwise would have followed. In the course of time vaginal

Post-mortem, twenty-four hours after death, showed a double uterus; the left uterus much larger and better developed than the right; the os of the left extending farther down into the pelvis; the body coalescing with the one on the right side. There was a small opening between the two at their fundi, and one Fallopian tube to each. There was salpingitis on the right side, none on the left. The inflammation extended to the right ovary, which was enlarged and also inflamed. There was pelvic peritonitis, and along the course of the rectum there was an ulceration two inches in length, having the appearance of a former abscess. There was half a pint of pus in the pelvic cavity. The ligaments of both uteri were highly in-

flamed; much pelvic peritonitis, but no peritonitis above the uteri and the appendages. The right uterus was completely covered by adherent membranes; at its mouth there was an abscess two inches in diameter. No doubt, from its situation, this purulent matter was increased at each menstrual period, and, by being reabsorbed from time to time, produced most of the blood-poisoning at the latter part of the patient's illness. The left uterus was also adherent by thick pseudo-membranes extending over the neck, but not entirely blocking the passage from the mouth to the vagina. Douglass's *cul de sac* was obliterated by exudations from chronic inflammation.

TRANSLATIONS.

NEUROPATHY IN A DYSPEPTIC.—M. Rueff says that nervous troubles due to dyspepsia are not infrequent. In one case given, vertigo, preceded by cloudy vision, was observed. When this patient was placed in a bright light his vision became obscured, and he appeared blinded for a short time. M. Rueff also reminds us that hypochondria with the apprehension of impending organic disease is often symptomatic of gastric disturbance, when no physical signs show themselves in connection with the stomach itself.—*Le Mouvement Méd.*

INFLUENCE OF INJURIES IN THE DEVELOPMENT OF TABES DORSALIS.—L. H. Petit, in a work "crowned" by the Paris Société de Chirurgie, bases his conclusions upon forty-seven recorded cases. He says that direct or indirect injuries of the spinal column (falls upon the back, seat, or feet) are followed by concussion of the spinal cord, from which, under some circumstances, chronic myelitis and tabes may develop. In persons subject to arthritis, syphilis, or alcoholism, and also in individuals predisposed to sclerosis, general injuries, by irritation of the spinal cord, may favor the development of tabes; injuries may cause the relapse of tabes which has been cured, and favor the progress of the condition when present. Since tabes is frequently accompanied by disturbance of nutrition in different tissues, it may influence the course of local wounds: this is shown by observations on contusion of the joints, fractures, and injuries of the soft parts. The author gives a case of Tenorier's, in

which a man of 38 who sustained a simple fracture of the thigh in pulling off a boot suffered from consecutive suppuration.—*Cbl. f. Chirurgie*, 1879, p. 324; from *Rev. Mensuelle*.

TUBERCULAR ARTHRITIS.—Lannelongue gives the case of a boy, 12½ years old, of a healthy family, who three months previously had been suddenly seized with a pain in the left knee, which, although it became swollen, permitted him to go about for six weeks. When first seen, the left lower extremity was weaker than the right; there was some swelling, with moderate effusion into the knee-joint. The bursa extensorum, as well as the capsules on both sides of the patella, were slightly thickened. The joint and inner condyle of the tibia, which were slightly prominent, were tender on pressure. Flexure to a right angle was possible, movement smooth. Rest, painting with iodine, and the elastic bandage were of no use. The patient died of tubercular meningitis after a time, when examination showed tubercles in the pia, in the lungs, and in the pleura. In the greatly swollen synovial of the left knee, reddened also here and there, were numerous whitish transparent and opaque nodules as in the pia mater; these were shown by the microscope to be tubercles. The cartilages of the knee-joint, generally smooth and shining, yet showed little granular excrescences and pits here and there. A softened white deposit in the inner condyle of the tibia beneath the cartilage. The vertebræ were sound. Lannelongue is of the opinion that this is the exclusive cause of those cases of tumor albus where the bones are relatively healthy, while the synovialis appears to be chiefly diseased. In the granulation-growths of these cases the tubercular eruptions can no longer be observed so unmistakably. He considers the eruption in the synovial primary, and thinks the disease apparently curable.—*Cbl. f. Chirurgie*, 1879, p. 333; from *Bulletin de la Société de Chirurgie de Paris*.

A CASE OF SYPHILITIC PHTHISIS.—M. Gouguenheim, at the Société Médicale des Hôpitaux, presented the lungs of a syphilitic patient who had died under his charge. The right lung was the seat of general tubercular infiltration; the lesions in the left lung were the result of syphilis. In the latter were also the lesions of pneumonia, partial pleurisy of the base, with

the presence of a milky liquid holding caseous matter in suspension. In addition there were cavities of various sizes, some due to the breaking down of gummata, others to true dilatation of the bronchi under the influence of interstitial pneumonia and peribronchitis. At the base of the right lung was a mass of friable calcareous tissue, softened in its centre, and due either to a gumma or an old encysted pleuritic effusion. The comparison between the lesions of the two lungs was very striking. The patient was a man of 45, who had been treated for serpiginous ulcers, together with advanced phthisis on the right side. He was cured and discharged, but returned at the end of some months with syphilitic phthisis of the left lung. He died of phthisis.—*La France Méd.*, 1879, p. 309.

ARGYRIA FOLLOWING NUMEROUS CAUTERIZATIONS OF THE PHARYNX WITH NITRATE OF SILVER.—*Il Morgagni* tells of a woman of 46, who, having submitted to numerous cauterizations of the pharynx with nitrate of silver, showed a bluish discoloration over the whole surface of the body. Two other cases of a similar character having been published, the writer in *Il Morgagni* concludes: 1. That frequent cauterizations of this sort are liable to produce discoloration of the skin. 2. That the absorption of the silver may take place in part through the mucous membrane, but probably is chiefly due to swallowing.—*La France Méd.*, 1878, p. 293.

AMMONIO-SULPHATE OF COPPER IN NEURALGIA OF THE FIFTH PAIR.—Dr. Féréol adds his testimony to the accumulating evidence in favor of this medicine. He has used it in powder, given in *cachets de pain*, but finds that in this form it causes pain in the stomach. It is better supported in mixture, and Dr. Féréol suggests the following:

R Cupri ammonio-sulphat., gr. ij;

Aquæ destillat., fʒiij;

Syr. aurantii flores, ad fʒiv.—M.

Two to four spoonfuls of this mixture are to be taken after each meal, and the remainder in small quantities from time to time, so that the entire quantity shall be consumed within twenty-four hours.—*Bull. Gén. de Thérap.*, 1879, No. 8.

TREATMENT OF SUBACUTE AND CHRONIC ARTHRITIS BY TROUSSEAU'S POULTICE.—Dieulafoy takes a pound or so of bread, and, removing the crust, cuts it into bits,

soaks these in water for a quarter of an hour, then takes them out, and, enclosing them in a piece of linen, expresses a portion of the water. The mass is then placed in a water-bath, where it remains for three hours, and is removed having the consistence of dough. This is softened by the addition of small quantities of spirit of camphor, and kneaded until it becomes like putty. Much stress is laid on the attainment of this putty-like condition. This dough is pressed out flat and square upon a piece of linen, which it covers to the thickness of a third of an inch. The following thinly fluid mixture is then spread over the surface of the plaster:

R Pulv. camphoræ, ʒv;

Extract. opii,

Extract. belladonnæ, aa ʒiv;

Alcoholis, q. s.—M.

The poultice is now ready, and is to be applied closely around the affected joint, and covered with oiled silk. The limb is then tightly bandaged so as to procure immobility, and the bandage is sewn together. This apparatus remains in place for eight or ten weeks, and may then be removed and replaced by another similar one. Dieulafoy, who has used this poultice in fourteen cases, recommends it most highly.—*Chl. f. Chirurgie*, 1879, No. 18; from *Gaz. Hebdom.*

TREATMENT OF DYSPNŒA BY HYPODERMIC INJECTIONS OF MORPHIA.—Dr. Huchard says that in heart troubles, and particularly in aortic troubles where there are symptoms of cerebral anæmia, well-directed hypodermic injections of morphia rapidly overcome the tendency to vertigo, syncope, and dyspnœa, probably acting by the well-known influence of opium in determining congestion of the brain. The same effect is produced in the dyspnœa of advanced phthisis and in that of uræmia, when, contrary to the general belief, morphia may be given without fear. Dr. Huchard administers the remedy to the amount of one-sixth to one-half of a grain, sometimes combined with one-sixtieth of a grain of sulphate of atropia, in twenty-four hours.—*L'Abeille Méd.*

CITRON-JUICE IN CHRONIC ENLARGEMENT OF THE TONSILS.—M. de Saint-Germain paints chronically enlarged tonsils twice daily with citron-juice with good effect, curing his cases generally within a fortnight.—*Rev. de Thérap.*; from *Four. des Sci. Méd. de Louvain*.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 5, 1879.

EDITORIAL.

VITAL STATISTICS.

GENERAL F. A. WALKER, the Superintendent of the Census, has just issued to every physician and surgeon in the United States, whose address is known at the office, a register in book form, intended to contain a record of deaths during the year June 1, 1879, to May 31, 1880.

These registers contain twenty-four pages, ruled, with headings to indicate the locality, date, name of the patient, sex, color, age, date of birth, occupation, cause of death, and fact of *post-mortem* being held or not, and are to be signed with the name of the physician. All communications are to be strictly confidential. Every facility will be afforded for the transmission of these records to the census office at the end of the year. Any physician who may have failed to receive his book of record can obtain it by simply sending a postal card, containing his name and address, to the Superintendent.

It is expected that these books, when collated, will present a complete statistical account of the mortality and morbidity of the United States.

The scheme now proposed has been submitted to many physicians, sanitarians, and vital statisticians throughout the United States, and has received their unanimous approval, together with that of the American Medical Association. Of course, every effort will be made, through the usual official agencies of the census, in the enumeration beginning June 1, 1880. But physicians throughout the country can do much to render the vital statistics of the

United States far more comprehensive and complete than they have ever been. It is to be earnestly hoped, therefore, that this enterprise of General Walker's may meet with the cordial support of the profession, and that no one will grudge the trifle of time and trouble which it may cost him to do his part towards the attainment of the desired result.

SEATS FOR SALESWOMEN.

THERE is a class in the community—an important class, since the individuals composing it are in many cases to take their place among the mothers of the coming generation—whose needs are not looked after as they should be by the philanthropist and the humanitarian. We refer to those young women who are found behind the counters in our ordinary retail stores on Chestnut, Eighth, and other streets.

These girls are expected to dress neatly on a minimum of salary, to be on duty from eight o'clock or earlier in the morning until six or later at night, with an interval for rest and dinner of half an hour (or, rarely, an hour) at midday, and, during all this time, must be constantly on the alert, ready to please the capricious taste of the buyer (*bona fide* or pretended), constantly moving, and, in the busy season, without a moment's rest, perhaps, from morning to night.

As it is the common lot of humanity to labor, perhaps we need not waste sympathy upon any one class to the exclusion of others, but as physicians we are called upon, from time to time, to protest against such oppression of the working classes as may be prejudicial to their own health and that of the community at large. With a refinement of—we will not say cruelty, but—severity, these shop-girls are frequently—in fact, we may say generally— forbidden, under any circumstances, to seat themselves or take any rest during the hours of labor. The shop may be empty;

it may be rainy or dark; the day may be practically over, and absolutely nothing doing; and yet these unfortunates, like sentries in the face of the enemy, must be constantly on the alert.

Nor is there any change in this rule for the varying conditions of the system. As the periodical return of languor and, perhaps, pain intimates the call of the system for some rest, some mitigation of the usual labor, the wear and tear of this constant standing position becomes almost beyond endurance. Uterine disease is induced when there is the least tendency to it, and aggravated to a high degree when it exists; and many a young woman leaves the duties of the shop to take up those of maternity with the seeds of future disease implanted, and needing only the added stimulus of child-bearing and lactation to break out and give rise to chronic invalidism.

That this injustice and unnecessary oppression should be remedied by those most interested in keeping it up—the heads of these establishments where young women are thus employed—is too much to expect of human nature. Ignorance and cupidity would find sufficient excuse in the necessities of business, even were the suggestion of reform made. The impulse must come from without, and no one is more fit to suggest the necessity of a change in the direction of more humane treatment for the female employees of the establishments alluded to than the physician, who, it may be, is the adviser at once of the proprietor and of the saleswoman.

Our English relatives are ahead of us in this matter. In London and some of the larger towns, associations have been formed for the amelioration of the condition of shop-girls, and already much good has been done in this way.

Measures of this sort are clearly within the province of the physician, who is alike qualified, both from his knowledge of the consequences of bad hygiene and his position as trusted adviser in many families,

to inculcate those humanitarian measures which should interpose between the strenuous demands of avaricious capital and the consequent suffering of helpless labor.

LEADING ARTICLES.

RECENT INVESTIGATIONS INTO THE PHYSIOLOGY OF THE PERSPIRATORY SECRETION.

THE physiology of the secretion of sweat has, within the last few years, attracted the attention of investigators to a considerable extent; so much so that between twenty and thirty papers upon this subject have been published in a little more than two years. Some of these have been noted in our columns from time to time, as they have appeared, but the recent publication of a general article on the subject by Dr. Blanchard* affords us the opportunity of collating the results thus far attained, and of giving a general view of our recent acquisitions in the knowledge of this important function.

In 1876 two authors, Ostroumow and Luchsinger, demonstrated, quite independently of each other, and without any knowledge of each other's work, that the secretion of sweat is not dependent upon the circulation, but is a true nervous function. Kendall and Luchsinger found that by exciting the sciatic nerve in dogs and cats an abundant secretion of sweat could be produced upon the sub-digital pulps, and that the phenomenon was produced even at a low temperature. The perspiratory secretion is not then, it thus appears, a simple transudation directly dependent upon the circulation. This is shown still further by the fact that irritation of the nerve, even in an amputated foot, produces the same secretion. Sweat may be considered as analogous to saliva in being a true secretion, and the special activity of the glandular cells is only excited by the irritation of certain nerves,—the secretory nerves,—and is not to be brought about under any circumstances if these nerves are not irritated. In another important paper, Luchsinger showed that the sudoriparous fibres of the sciatic nerve are derived from the abdominal branch of the great sympathetic. He also stated that the sudoripa-

* La sécrétion de la sueur.—état de la question. *Le Progrès Médical*, 1879, p. 322.

rous fibres (of the posterior paws in the animals operated upon) are connected with the cord by communicating branches; they are found in the anterior roots, and arise from the cord by the first four lumbar and the last two or three dorsal roots. Luchsinger also showed that the secretion of sweat may be brought about reflexively.

Pilocarpine, injected hypodermically, produces, as has been shown by Weber and others, an abundant secretion of sweat. Luchsinger demonstrated that this occurs through excitation of the centres. The abdominal aorta of a cat having been ligated, pilocarpine was injected into a vein. Of course it could not reach the glands of the paw and excite them directly, nevertheless the secretion of sweat was produced. Again, if after a copious perspiration was produced by pilocarpine atropia was injected, the secretion of sweat ceased. If then some more pilocarpine was injected into a paw, this paw soon became bedewed with perspiration, while the rest of the body remained dry. Luchsinger concluded from this a double antagonism between pilocarpine and atropia.

Nawrocki confirmed these researches of Luchsinger, and demonstrated, in addition, that in the cat there exists a common sudorific centre in the medulla oblongata for both fore and hind paws. He also demonstrated the course of the fibres influencing the secretion of sweat in the fore paws.

A little later appeared Adamkiewicz's pamphlet "*Die Secretion des Schweisses, eine Bilateral-symmetrische Nervenfunction.*" In this work, based upon experiments made in man as well as the lower animals, Adamkiewicz confirmed Luchsinger's opinion that the secretion of the sweat is independent of the circulation. Like that author, also, he showed that it may be produced by different conditions, as (1) by artificial and voluntary irritation of the muscles and of their nerves; (2) by the imagination; and (3) in a purely reflex manner, by cutaneous excitation. Adamkiewicz also showed that in man the secretion of sweat is always bilateral and symmetric, and is independent of the point at which the irritation producing it is applied. Among thermic excitants heat alone can provoke it; cold seems to be without influence.

With regard to the sudorific centres,

Adamkiewicz, as the result of his investigations upon young cats and upon the human subject, arrives at conclusions quite different from those of Luchsinger and Nawrocki. He asserts that "the nervous apparatus which presides over the secretion of sweat appears to originate on the surface of the brain."

Vulpian, whose researches have been published in the *Comptes-Rendus*, is inclined to differ from the earlier-mentioned observers with regard to the origin of the sudorific nerves; he considers them as arising, in part, from the roots of the sciatic, not simply from the abdominal sympathetic. He also points out the connection between the sudorific and salivary secretions through the sympathetic. Vulpian, however, agrees with the other investigators in regarding the secretion of sweat as quite independent of the circulation, or certainly without necessary connection with it. In man, either in a normal or in a pathological condition, it is well known that an abundant perspiratory secretion may take place while the cutaneous circulation is slow and the skin pale or cyanosed. In cats an abundant hemorrhage produced by a wound of the digital pulps diminishes and tends to arrest, when the peripheric segment of the corresponding sciatic nerve is faradized; this experiment places beyond doubt the possible coincidence of an exaggerated secretory action of the sweat-glands, and, at the same time, a marked diminution of the afflux of arterial blood in the digital pulps of the corresponding member. Luchsinger, it should be said, has recently admitted Vulpian's view of the origin and distribution of the sudorific nerves as correct.

Finally, Trumpy and Luchsinger have, within the last few months, shown that the perspiratory secretion in man is not acid, as has been generally believed, but is in reality alkaline. The old mistaken view has probably arisen from the admixture of sebaceous matter, which is either naturally acid or becomes so by decomposition. The importance of these recent advances in physiology is certainly great, and there is reason to expect still greater discoveries in this direction before long; especially is there hope that light will be shed on some of those obscure pathological processes in which abnormal sweating forms one symptom.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting held at the hall of the College of Physicians, Philadelphia, March 26, 1879, Dr. Henry H. Smith, President of the Society, in the chair, Dr. H. Lenox Hodge read a paper upon "Colpo-cystotomy," with a report of several cases illustrating the operation. (See p. 471.)

In reply to questions from Dr. O'Hara, Dr. Hodge said that in vesical calculus it is usually preferable to dilate the urethra, and thus remove the stone, rather than resort to any cutting operation. When the urethra has thus been dilated it generally quickly returns to its normal condition, and the urine is often perfectly retained.

As regards the temperature of the water necessary to relieve pain, it is advisable to have it as hot as the patient can bear.

Dr. Albert H. Smith said that he was gratified with the paper of the evening, but was compelled to differ in some points from the lecturer. In regard to the method of performing the operation, he could not agree with him as to the position of the woman, and believed it to be of great importance to have the patient properly placed in any gynecological procedure. He preferred the knee-elbow position. In order to use the Sims' duck-bill speculum, with the patient upon her back, she must be placed so that her hips are far over the edge; there must be plenty of room. And then, if etherization is at all moderated, the patient is liable to struggle and twist herself, with the duck-bill speculum against the edge of the bed. The advantages of the knee-elbow position are that the difficulty with the speculum is avoided, and that the viscera draw the uterus and the anterior wall of the vagina so as to give a better control of the part than before, and the operator gets a much better view of the anterior wall of the vagina than in the other way. You are looking down upon the field of operation when the patient is in the knee-elbow position, but when on the back you are looking upwards.

The writer of the paper also insisted upon the preliminary division of the urethra. Dr. Smith was unable to see how, in any great proportion of cases, it is at all necessary to lay open the urethra to explore the bladder. If we can dilate the female urethra sufficiently to enable us to introduce a finger, it is not necessary to use the knife. Why should we complicate the operation by opening the lower part of the vagina, and injure the bladder at a place where it heals so slowly? Then again, he did not like to interfere with the sphincter muscle when it is possible to do without, especially where we afterwards want to heal up the wound. By the introduction of the finger

into the bladder we can thoroughly explore the wall, accurately calculate the exact position of the proposed incision, and, pouching out the septum, use the finger as a counter-support in cutting through the walls. Then, as regards the thermo-cautery, he could not agree with Dr. Hodge, as he preferred the knife. From observation of cases, he had concluded that it is better to use the knife. The introduction of a red-hot instrument of any kind into any of the interior portions of the body, when the patient is etherized, is a source of danger which it is better to avoid. We may have to use it in malignant disease of the uterus or to stop hemorrhage, but only in urgent need. We know that etherized patients often struggle and give a sudden lunge to one side or another, which would be dangerous with a red-hot instrument in the hand. Then you lose the advantage of having the finger to guide the instrument; you would not like to have a finger in the bladder, and cut down with the hot knife upon it. With the knife you have an opening which, when you are ready for it to close, will do so more surely, and without loss of tissue or cicatricial contraction. Nor, in his experience, had the danger of hemorrhage been so great as feared; and it generally ceased after the insertion of the silk ligature or the wire. There is never any hemorrhage that could be considered dangerous from such a wound at the time of operation.

The lecturer had spoken of the difficulty in keeping open the wound after it is made. This is also met by Dr. Emmet, who advises the use of a peculiar self-retaining instrument (of glass), which keeps the wound open, and, at the same time, admits of connection with a rubber tube and urinal, allowing the patient to go about her household duties in comfort.

Having used this instrument at the Women's Hospital in this city and in private practice, he had obtained excellent results from it, but had thought a modification advisable, and had brought some of the improved instruments with him. The tube he had made longer, so as to extend outside the vulvar opening, and so arranged that all drainage passed outside. These are now used at the Women's Hospital with admirable results.

He spoke of a case of colpo-cystotomy, where there was loss of urethral tissue from specific ulceration, and from the constant dribbling there was much superficial irritation of the parts around. After inserting this instrument the patient declared herself to be more comfortable than she had been for three years. As soon as the excoriations heal, a plastic operation will be performed to restore the urethra.

It is not necessary to use a winged catheter to keep the wound open. The reason why we have a permanent vesico-vaginal fistula resulting is from loss of substance after labor,

or from sloughing and ulceration; the opening cannot close because it cannot draw upon the surrounding tissues. He would recommend, instead of the winged catheter, the self-restraining catheter of Dr. Goodman, to which is attached a long tube going to the urinal.

In reference to the removal of stone from the bladder, there are several methods of operating. Dr. Anna Broomall, physician in charge of the Women's Hospital of Philadelphia, recently removed a large stone by colpo-cystotomy and perforation, after exposure of its surface, by a diamond drill rapidly rotated by Bonwill's dental engine (reported in *American Journal of Medical Sciences* for January, 1879, p. 143). There was not the slightest contusion or injury to the bladder from the use of the drill, which, moving at the rate of ten thousand revolutions per minute, pierced the stone like a piece of wax. This method is entirely unique, and likely to supersede all others in removing a large calculus from the female bladder. The slightest pressure sufficed to perforate the stone in different directions, until it could easily be broken into fragments by a small pair of bone forceps, and extracted through the small opening by which its surface was exposed. It weighed nearly five ounces. At the time of operation the patient was steadily failing, and, although no shock was experienced from the operation, she died in ten days from a large abscess in the kidney. The bladder-surface was found to have been absolutely free from injury or contusion.

Dr. H. Lenox Hodge, in reply, said that if any one would test the relative merits of the "knee-elbow" position and the "breach-back" position of the Germans, he would soon become convinced of the merits of the latter. It is not simply a position on the back, but the breach is so elevated, by strongly flexing the thighs, that it rises above the abdomen, and the vulva is directed upward towards the ceiling. The pressure of the viscera brings the vaginal surface of the urethra to the orifice of the vagina, and it can be operated upon almost as easily as if it were on the exterior of the body. In the knee-elbow position, the distention of the vagina with air draws the parts away from the operator into the interior of the body. This renders the employment of the knife more difficult, and the use of the cautery more dangerous. Dr. Wilson, of Baltimore, in using the cautery in the knee-elbow position for cancer of the uterus, found it necessary to employ a hollow cylinder of wood to protect the surrounding parts. The breach-back position of the German professor Simon has all the advantages of the knee-elbow position of Dr. Sims, without its disadvantages.

As regards the knife and the thermo-cautery, each is best adapted to different conditions. When it is desirable to have the wound quickly

closed, use the knife; when it is necessary to keep it open for a long time, use the cautery. The sloughing caused by the cautery tends to keep the wound open. It is a great advantage, when possible, to do without any foreign body in the wound. In cases of cystitis, the presence of even the beautiful instrument just exhibited by Dr. Smith must cause additional irritation.

Metallic catheters have some advantages over the flexible, but after operations and in bad cases of irritable bladder the soft catheter is more easily borne and causes less irritation. In the male, this has been strongly insisted upon by Sir Henry Thompson.

The laying open of the whole urethra is not recommended as an ordinary practice. It was only done in one case, which was exceptional.

The use of the drill for the breaking of stone, as lately done by Dr. Broomall, is new. It is a beautiful mechanical instrument. To break a stone so large as to weigh five ounces by any other instrument would be almost impossible. Any ordinary-sized stone, however, can easily be broken by the ordinary lithotrites without any injury to the bladder.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, MARCH 27, 1879.

THE PRESIDENT, DR. H. LENOX HODGE, in the chair.

Scirrhus of the male breast. Presented by Dr. S. W. GROSS.

A GERMAN, 59 years of age, first noticed, a year ago, a firm swelling of the right breast, which gradually but painlessly increased in size until it formed a densely-hard nodular tumor, which measured upwards of an inch in diameter, and projected about six lines above the surface. The skin was red and excoriated, and covered, for the most part, with a crust, from the application of a salve, but the nipple was not retracted. In the centre of the axilla were two glands, closely connected with each other, which were first detected about six weeks ago. He was a small, muscular, healthy subject, and there was no history of cancer in his family.

The diseased structures were removed by Professor Gross, on the 4th of March, 1879. The entire mamma was converted into a lenticular tumor, an inch and a quarter in length by three-fourths of an inch in its greatest thickness, the cut surfaces of which were concave from above downwards, and of a delicate rosaceous-white tint, traversed by nacreous white bands. The larger lymphatic gland was elastic, and three-quarters of an inch in diameter. Its capsule was very vascular, and its substance was grayish-white, and mottled with blood extravasations and yellowish-white

granular points. The smaller gland was densely hard, of a whitish hue, and about one-third of an inch in diameter.

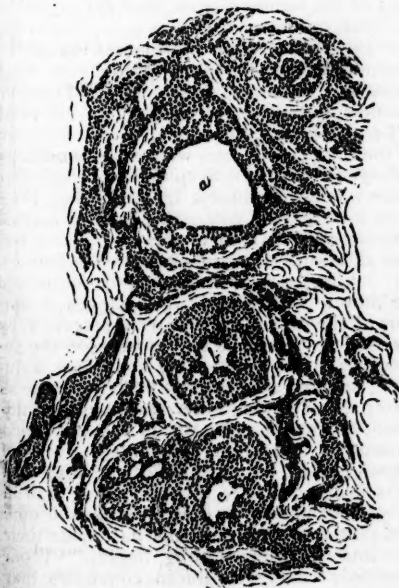
Examination of frozen and stained sections disclosed that the connective-tissue framework of the mamma was infiltrated by small, round cells, and pervaded by variously-shaped, simple or branched, solid cell-cylinders, which, on transverse section, looked like choked ducts; so that the growth is to be classed as a tubular carcinoma. Although the cells, *in situ*, could not be distinguished from white blood-corpuscles or the ordinary products of connective-tissue hyperplasia, scrapings of the cut surfaces of the tumor proved them to be polymorphous, and of an epithelial type. In addition to these appearances, there were many enlarged and deformed acini, more or less closely packed with small cells of the same character, the undermost layer of which, however, was columnar, and rested upon the thickened *membrana propria*, the endothelial cells of which were increased in size and number. Immediately adjacent to some acini, and entirely distinct from them, were epithelial plugs; around others the plugs were encroaching upon the acini; while in others, at one or more points, the *membrana propria* had disappeared, and the cells of the acini were prolonging themselves into the surrounding lymph spaces, to fuse with the mobile cells

closely packed acini, from the upper and lower of which the epithelium is extending itself into the lymph spaces, as may be seen at the inferior circumference, to the right. The smaller bodies represent solid cell-cylinders, which are the outgrowths of other acini, while the cells themselves are merely represented by their stained nuclei. Whether the morbid process originated within the acini, and the cell-cylinders were to be regarded as deformed acini prolonged into the lymph spaces, or whether, on the other hand, there was simultaneous heteroplasia of the connective-tissue corpuscles and of the glandular epithelium, the products of which subsequently united through the disappearance or destruction of the *membrana propria*, was not easy of determination. On the whole, however, I am disposed to regard the neoplasm as being of epithelial origin.

The larger lymphatic gland, in addition to being the seat of irritative changes, was, for the most part, converted into an exquisite carcinomatous structure of the ordinary type, as indicated by the formation of new connective tissue, which enclosed ovoid or roundish spaces filled with epithelial cells. In the smaller gland it appeared as if the structure of the primary growth was reproduced, as the cell-accumulations were mainly tubular or cylindrical.

Records of scirrhus of the male breast are so rare that I may be excused for referring to two cases in which the minute appearances are detailed. In one from the practice of Wagstaffe,—and it is the more interesting, as both mammae of a man of 61 years were affected,—Dr. Creighton,† who studied the growths, describes the firmer one as being composed solely of greatly-enlarged and deformed acini, filled with polyhedral or normal epithelium, and contained in a coarse fibrous or chronic inflammation stroma, while the softer one was undergoing caseation of detached cells within the acini. In the second example, reported by Wood,‡ the structure was that of ordinary carcinoma, the alveoli being filled with large, irregular-shaped cells; but it differed from the specimens just described, in that the vessels of the stroma projected as highly-vascular buds or villous processes into many of the alveoli, which were also the seat of blood-extravasations through rupture of the vessels. It was removed from a gentleman 60 years of age, and had been the source of occasional bloody discharge from the nipple.

It will be observed that these three illustrations of carcinoma of the male mamma are very unlike in their minute characters. That examined by myself is a true scirrhus, fibrous, or tubular growth, and corresponds to the



192 reduced one-half.

contained in them. These appearances are shown in the drawing, for which I am indebted to Dr. E. O. Shakespeare, *a, b*, and *c* representing three enlarged and more or less

* Trans. Path. Soc. London, vol. xxvii. p. 234.

† Ibid., and Contributions to the Physiology and Pathology of the Breast, p. 145.

‡ Trans. Path. Soc. London, vol. xxv. p. 223.

ordinary type of the affection. The specimen of Wagstaffe was one of acinous tumor, and was peculiar in representing a purely hyperplastic process, as the enlarged acini were filled with normal epithelium, through which it might rather be regarded as an adenoma; while that of Wood was a telangiectatic carcinoma, which is synonymous with the erectile or hematomatous variety of Cornil and Ranvier; but it is, so far as I am aware, unique, in that the vascular tufts were associated with hard instead of with soft or medullary carcinoma.

It is possible that these cases represent different stages of development, and that they afford a clue to the point of origin of carcinoma of the breast. In that of Wagstaffe, the changes were limited to simple multiplication of normal epithelial cells, with enlargement and deformity of the acini. In my own case, which, in parts, may be said to represent the second stage, the dilated acini were filled with atypical cells, and they were evidently extending themselves as tubular prolongations into the lymph spaces. In the example of Wood the metamorphosis was complete, the alveolar structure being due to the fusion of the epithelial cells of the acini with the small-celled infiltrate of the periacinous connective tissue.

Scirrhus of the male mamma is so infrequent when compared with the female breast,—the proportion, according to Paget's and my own observations, being as two to ninety-eight,—that I take this opportunity of showing you an example of the affection in this man, who is 63 years of age. About five years ago his attention was attracted to the nipple by its being the seat of itching, when he scratched off a thick crust of epidermis, which he describes as resembling a pearl button. The scab reformed, and was removed from time to time, but the nipple beneath it does not appear to have been sore or red. Last June he was struck over the breast, and two months subsequently he accidentally found that the nipple was excoriated. Four months ago he noticed that the mamma was nearly or quite as large as it is now; but he observed that the axillary glands were enlarged about eight weeks before he received the blow. The left mammary gland is converted into a hard discoid tumor an inch and a quarter in diameter, and its centre is occupied by a superficial ulcer, which has destroyed the nipple, and measures five-eighths of an inch transversely and three-eighths of an inch vertically. Its lower edge is inverted, puckered, and hard; its base is partly covered by a soft crust; and the skin is elevated into slight ridges, which radiate from its circumference. At a distance of two inches from the tumor there is an enlarged lymphatic gland on the side of the chest, over the fifth rib, while there is a large cluster of indurated glands high up in the axilla. His general health is excellent, the

growth has never caused him the slightest pain or other inconvenience, and there is no history of carcinoma in his family.

This case is of great interest, as it elucidates a practical point in the pathogenesis of carcinoma of the mamma,—namely, that it is often preceded by and attributable to certain chronic affections of the nipple and areola, to which attention was first directed by Sir James Paget,* and has since been observed by Busch,† of Bonn. The cases of Paget, fifteen in number, occurred in women, varying in age from 40 to 60 years, in the majority of which the nipple or areola was the seat of an intensely red, very finely granular raw surface, discharging a copious, clear, yellowish, viscid fluid, and attended with a tingling, itching, or burning sensation. In some the eruption presented the ordinary characters of chronic eczema, while in others it was dry like psoriasis. In none of the cases was the appearance of the carcinoma delayed beyond two years, and it usually followed within one year; while the development of the disease was not primarily in the skin, but in the substance of the gland, beneath or not far from the affected skin, and always with a clear interval of apparently healthy tissue.

With the view of determining whether there is any real connection between chronic eczema of the nipple and areola and carcinoma, Mr. Butlin‡ examined two breasts which were the seat of the former disease, and found that, in addition to the ordinary changes produced in the skin by eczema, the ducts were widely distended, and contained, frequently, large masses of squamous epithelium, and that the connective tissue was infiltrated with small cells. In an induration, which existed in one of the breasts, the acini were also found to be enlarged and filled with epithelium. Although there was no carcinoma in either case, these facts indicate the commencement of morbid processes which lead to the development of that affection. Continuing his investigations, Mr. Butlin,§ a year subsequently, described the minute anatomy of two instances of scirrhus of the mamma which were preceded by eczema. In both, the tissues between the neoplasm and the areola were somewhat indurated, and the appearances were the same as were present in the former cases, with the addition, in one, of cell-nests in the thickened portions of the areola and nipple, and of "much greater enlargement of the acini and ducts in the centre of the carcinoma than in the previous cases, so that they had become confluent, and their contents had made their way into the surrounding tissues." From these four cases Mr. Butlin concludes that eczema is an exciting cause of scirrhus through primary heteroplasia of the epithelium of the

* St. Bartholomew's Hospital Reports, vol. x. p. 87.

† Langenbeck's Archiv, vol. xxi. p. 687.

‡ Med.-Chir. Trans., vol. lix. p. 107.

§ Ibid., vol. lx., p. 153.

ducts, along which the disease travels to reach the acini and smaller canals.

Adenoid fibroma of the breast. Presented by Dr. S. W. GROSS.

Dr. S. W. Gross exhibited a specimen of adenoid fibroma, which was removed by Dr. W. G. Porter from a lady 26 years of age, who first noticed it as a small lump, at the upper and inner circumference of the mamma, eight years previously. She had been married only a few months, and thought that its increase had been rapid during that time. It was freely movable, and painless throughout, and the skin and nipple were normal.

The tumor was flattened and ovoidal in form, and measured three inches and a half in length, three in breadth, and one inch and a half in thickness. It was lobulated, uniformly firm and somewhat elastic, enclosed in a thin capsule, and presented, on section, a coarse fibrous appearance, with a few dilated ducts. Attached to it, by a rather broad pedicle, was a second growth, of the volume of a small walnut.

The microscope revealed an abundant, for the most part mature, wavy, fibrous tissue, throughout which were interspersed numerous acini and ducts filled with epithelium. Some of them were becoming converted into cysts, through dilatation of their walls and mucoid transformation of the cells.

In his remarks on this specimen, Dr. Gross stated that minute examination of twenty-eight fibromas and sarcomas of the mamma had convinced him that, while the majority of the connective-tissue neoplasms contained lacteal glands, so that they are mostly mixed growths, the amount of persisting glandular tissue is proportionate to the chronicity of the tumor. In this specimen, for example, the acini were abundant, while in the fibroma exhibited by Dr. Keen during the past winter, which had attained a circumference of fifteen inches in six months, a large section disclosed only one enlarged and deformed lobule and a few dilated ducts.

Case of aspergillus glaucus in both auditory canals of a woman. Presented by Dr. CHARLES H. BURNETT.

The specimen of fungus—the aspergillus glaucus or flavescens—which I present this evening was removed, February 20, 1879, from the left ear of a lady 30 years old, both of whose ears were affected by the fungus.

It may be of interest to state that this patient was afflicted, three years ago, by the growth of aspergillus nigricans in both ears.

The patient stated that during a month and more, previous to her visit to me last month, both ears had itched and burned very much, that she had scratched the canals in spite of herself, and that at last a watery discharge had come from them. They began to feel stuffed up; the hearing became dulled; the auricles had become somewhat tumid and red, probably from manipulation; and there

had been one or two small furuncles in the canal of the left ear. The annoyance had made the patient nervous and depressed, and there were some dyspeptic symptoms.

A physician in Asbury Park, where she resides, had prescribed cajuput oil and other oils for her ears, but the more oleaginous matter she had put into her ears the worse they became.

Upon inspection with the aural mirror and speculum, both canals were seen to be plugged with a dark grayish mass. By means of the syringe a glove-finger cast of each canal was washed out, one of which I show you in this small vial. Its peculiar shape has been destroyed to a great degree, on account of tearing it to get microscopic specimens from its deepest parts. The fungus was found growing in both auditory canals, and the skin lining the latter was found greatly tumefied and inflamed, and at spots ulcerated. The history of the case showed that there had been a seborrhœic condition of the ears before the fungus began to grow in them.

The symptoms of the growth of this fungus in the ear have already been detailed by me, in a paper presented to you last spring. My chief object in laying this specimen before you is the exhibition to the Society of this rare form of aspergillus. In twenty-two cases of aspergillus in the ear, this is the first instance of the aspergillus glaucus I have met, the other twenty-one cases being of the aspergillus nigricans.



In the woodcut I herewith show you, the latter fungus—the aspergillus nigricans (b)—is seen to be the larger, and its receptaculum is evenly surrounded by its sterigmata; whereas in the aspergillus glaucus (a), the variety exhibited this evening, the receptaculum is bare on its lower fifth and the entire head is smaller than the aspergillus nigricans.

It is also worthy of note that the receptaculum in this variety is pear-shaped, while in the aspergillus nigricans the receptaculum is spherical, being also marked at its point of juncture with the stem by a constriction. These diagnostic points are so sharp that no difficulty need be experienced in differentiating one form of the fungus from another.

Whether this form shown you to-night excites a severer and more obstinate inflammation in the ears than the *aspergillus nigricans* yet remains to be shown. Its occurrence is much less frequent than that of the *aspergillus nigricans*.

Case of ulcerated and fungous cystic tubular adenoma of the female breast. Presented by Dr. M. LONGSTRETH. Notes by Dr. H. M. FISHER.

Mary W., admitted January 10, 1879, under the care of Dr. Morton, in the Pennsylvania Hospital. Single; æt. 50; dressmaker; born in Ireland.

Her parents were healthy, and lived to an advanced age. A sister had a tumor of the breast, which was "burnt out with caustic," and she has had no return of the disease since. A brother has a "sore" on the cheek.

About eighteen years ago she first noticed a swelling of her left breast; this remained without appreciable increase in size, or without giving her any inconvenience, until seven or eight years ago. It then became much swollen after a course of sea-bathing. In four months it had swollen to a large size, and in about a year it burst and discharged a brownish watery fluid. The swelling then entirely disappeared, and during four months she was entirely free from any swelling of the breast. Four months later, however, another swelling occurred immediately beneath the seat of the previous swelling; it was also painless.

For about six years there was a constant slight discharge from the swelling. About four months previous to admission the swelling increased very rapidly, and the discharge had been much freer, and had become much more offensive.

According to her statement, it had not bled much except when she picked it, which she had done with the idea that free bleeding lessened the offensive odor. She has lost flesh and appetite during the last three or four months only. Has always been pale and thin.

Upon admission the patient was pale. There was a tumor as large as a child's head hanging from the outer side of left breast, moderately soft and somewhat lobulated. The surface was ulcerated, blackened, covered with black clotted blood, and purulent matter exuded from the surface. The lymphatic glands of neck and axilla seemed to be entirely free from enlargement. The odor exhaled from the mass was very offensive. On pressure, a bloody, watery fluid exuded in jets. The mass was movable on the thoracic wall.

January 11, Dr. Morton removed the mass by a curvilinear incision about six inches in length. There was pretty free hemorrhage after the removal of the tumor, requiring six ligatures to control it. After the operation there was considerable pain. In the evening, temperature 101.5° F.; pulse 106.

The wound healed rapidly by adhesion; there was very little discharge. She was discharged, February 6, 1879, well.

The tumor, when handed to me after removal for examination, had a very offensive odor, due to the decomposing blood and matters contained in it. Its surface was uneven and nodulated, and of a black color; by slight pressure, there flowed from it a thick bloody fluid. The greater part of the surface showed the results of ulceration, and was covered by thick, dry crusts of tissues. Towards the base of the tumor, the skin covering it had a purplish color; at the border, towards the ulcerated part of the tumor, the skin was elevated by cysts or sinuses beneath it filled with blood, which, by pressure, could be emptied, immediately refilling when the finger was removed. The diameter of the tumor at the level of the chest-wall was about three inches, whilst the fungous mass at a level two inches higher (about one-third of the distance to its summit) had a diameter of about six inches. The depth of the tumor, from its most prominent point to its base, was nearly six inches. The anterior surface was flattened, but irregular, due to ulcerative destruction of the part, thus giving the mass the form of an oblong flattened sphere, the greatest diameter being transverse.

The fungoid mass, therefore, overhung and partly concealed the skin covering the deeper parts of the tumor. On raising up the mass, a deep pit large enough to hold the point of the index-finger was found on the inner side, concealed in the fold between the tumor and the skin. This depression was found to be due to the retraction of the nipple. The usual coloration of the nipple and its areola was lost in the purplish hue of the skin at this part of the growth.

On making a deep section of the tumor, carried from its most projecting point nearly to the base, tissues of varying appearance were brought to view. First, the surface was found to consist, in parts, of skin, dead, dry, infiltrated, and blackened by blood-coloring matters; other parts of the skin covering the mass had ulcerated and been removed, the crust covering the deeper parts consisting of dried tissues equally blood-stained and black. Beneath this surface were found cavities in the tissues filled with blood-colored fluid; the size of the cavities varied from minute pin-head-sized cysts to large openings capable of holding a small walnut; the contents of these cavities varied somewhat in consistence, but were thin and serous, quickly flowing away on section.

Deeper, the cysts were large in size, but were separated by thicker bands or masses of tissue. More superficially, the walls of the cysts were thin and membranous; deeper, the tissues surrounding the cavities were firm and flesh-like, and, like all the tissues in this part of the tumor, stained of a deep-red color.

On reaching the lower third of the section, tissues of an opaque-white color were reached, which, on the surface of the section, appeared like gland tissue; from them exuded a thin, semi-transparent, whitish fluid. The consistence of this part was about that of the tissue found in normal mammary gland, but somewhat more elastic. There was no distinct demarcation between the cystic portion and that found lower in the section; the consistence and the color of the two parts were entirely unlike, but no capsule or fibrous band separated them distinctly.

On inspection of the base of the tumor, some adipose and muscular tissues were found covering the mass; they were of normal appearance. Resting on them were found the lobulated masses of the tumor, having the same color and consistence as the tissue composing the deeper parts of the section above described.

These lobules of the tumor were covered and separated from the adjacent lobules by a thin, shining, fibrous capsule, which was not adherent (or only loosely so) to the submammary tissues. Several large vascular trunks were seen penetrating its base, and taking a course especially towards the outer or fungoid portion of the mass.

Sections made with the freezing microtome, without hardening, from different portions of the neoplasm, were examined by Dr. S. W. Gross, to whom I am indebted for the following report:

"The entire lower third of the tumor was composed partly of dilated and deformed and, here and there, confluent acini, the membrana propria of which was perfect, and lined with regular columnar epithelium, and packed with polymorphous cells, which had undergone fatty degeneration at the centre of some and mucoid changes at the centre of others. In a few there were vegetations, made up of delicate connective tissue, and covered with columnar epithelium. In addition to the changes in the size and form of the acini, and the proliferation of their epithelium, excessively elongated, but only moderately wide, tubules pervaded the sections to such an extent that they greatly preponderated throughout the entire growth. Some were fusiform, but the majority were irregular in their outline, being alternately contracted and dilated, like a row of ovoid beads. They pursued, as a rule, a parallel course, but they now and then divided and intercommunicated, and some at several points were in direct connection with the altered acini, of which, indeed, they were merely outgrowths or prolongations, so that from one acinus I counted nine offshoots. They all retained their proper membrane invested by columnar epithelium, and the majority preserved their lumen throughout, although they frequently terminated in attenuated solid processes, which not uncommonly were curved or turned

upon themselves. The intertubular connective tissue was very sparse in quantity, so much so, indeed, that on transverse section the ducts were so closely crowded together that their limiting membranes appeared to be in contact with one another. There were also a few areas of the normal, dense, fibrous tissue, into which the ducts were extending. Sections of the 'fleshy part of the fungus' were so obscured by a small-cell infiltration that little else was to be observed, save enlarged ducts and acini which had undergone cystic changes; while a section of the 'skin near the ulcerated margin of the tumor' disclosed that it was the seat of chronic inflammatory changes. From these considerations I would classify the neoplasm as a cystic tubular adenoma," a form of tumor which is so rare that the only other example on record is that described by Billroth.*

REVIEWS AND BOOK NOTICES.

HANDBOOK OF DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT AND NASAL PASSAGES. By CARL SEILER, M.D. Thirty-Five Illustrations. Philadelphia, Henry C. Lea, 1879, pp. 156.

The intention of the author, expressed in the preface, to make this little book "serve as a guide to students of laryngoscopy in acquiring the skill requisite to the successful diagnosis and treatment of diseases of the larynx and nasopharynx," has been most ably carried out. Cleanliness in the management of instruments used in the examination of patients is enjoined from beginning to end, and if the student learns only this lesson he will have learned much. The ordinary diseases of the larynx and nasopharynx are described in terse sentences, and the treatment recommended is both rational and abundant. Dr. Seiler approves of the use of the nasal douche, when properly employed, and, like many others who have availed themselves of this valuable instrument at the right time and in the right way, he has never met with any bad results: on the contrary, he has always accomplished some good, if not entire relief, for his patients by its use. He gives minute directions for its application. In the administration of iodide of potash the author has found it highly advantageous to combine with it the bromide of potash, "because the one seems to enhance and at the same time control the action of the other."

Seiler's uvula scissors seem unequalled by any others for conveniently amputating part or all of the uvula. The entire book is admirably illustrated and beautifully printed on very fine paper, its entire literary appearance

being in keeping with the well-known taste and care of the publisher. We most heartily commend this book as showing sound judgment in practice and perfect familiarity with the literature of the specialty it so ably epitomizes.

C. H. B.

NEW AND ORIGINAL THEORIES OF THE GREAT PHYSICAL FORCES. By HENRY RAYMOND ROGERS, M.D. Published by the author. MDCCCLXXXVIII., 12mo, pp. 107.

In this work the author endeavors to set forth his own theories of the "Great Physical Forces." As these theories are totally different from those generally accepted, and as the argument involves the demolition—scientifically speaking—of such authorities as Bruno, Kant, Laplace, and a few others, it is rather "hard lines" to have it done in a hundred duodecimo pages of open type. It is reassuring, however, to learn from the author's preface that "he claims not infallibility."

CLINICAL REMARKS ON GLEET: ITS CAUSES AND TREATMENT. Delivered in the Aberdeen Royal Infirmary by J. C. OGILVIE WILL, M.D. London, J. & A. Churchill, 1879, 8vo, pp. 31.

Within the brief compass of 31 pages the author attempts to bring together, in a short and concise form, the more modern views regarding gleet and its treatment as given by recent authorities on the subject, more especially Van Buren and Keyes, Bumstead, Berkeley Hill, Ch. Phillips, and Otis. No originality is claimed, but the writer presents the views of these distinguished authors in a clear and concise manner. He has added also a lithographic plate giving drawings of some of the chief instruments of modern device for use in the treatment of gleet.

THE VISITING LIST OR POCKET DOSE-BOOK. Published by the Metric Club, 188 Clark Street, Chicago, 1879, 16mo, pp. 25.

A missionary effort on the part of the metric brotherhood, this booklet is said by those who put it forth to render the use of the metric system easy and attractive even to old practitioners. It contains a list of several hundred drugs and preparations, with their ordinary and their metric doses arranged in parallel columns; also a table for the conversion of one system into the other, and a page devoted to the delineation of the centigrade and Fahrenheit thermometric scales, together with a scale of millimetres. The latter alone is worth the price of the whole volume, which is "sent free on the receipt of six cents in postage."

POCKET THERAPEUTICS AND DOSE-BOOK, ETC. By MORSE STEWART, JR., B.A., M.D. Detroit, Emil Scholer, printer and binder, 1878, 32mo, pp. 101.

There are few subjects connected with symptomatology, therapeutics, toxicology, and

the allied branches of medicine which are not touched upon in this miniature volume. It is unnecessary to say that the topics are treated very briefly. This is the sort of a vade-mecum which one might take on a balloon excursion, where any emergency might occur, but where only the lightest weight could be carried. We regret to see nothing about obstetrics. A line or perhaps two on the various procedures in midwifery would make the volume complete.

AMERICAN HEALTH PRIMERS.—LONG LIFE, AND HOW TO REACH IT. By JOSEPH G. RICHARDSON, M.D. Philadelphia, Lindsay & Blakiston, 1879, 16mo, pp. 160.

Dr. Richardson's subject may be said to be of universal interest. We all want to attain the object; how to do it is well worth finding out. Dr. Richardson treats of the causes of disease and how these may be avoided, contagion and the means of escaping it, clothing, pure air and water, baths, the houses we live in,—or ought to,—food and drink, exercise, sleep, the hygiene of the brain, and, after a brief chapter on parasites, concludes by describing the proper method of growing old gracefully and with comfort. This is a good deal to get into one small volume, and it is needless to say that the subject is treated from a popular stand-point, though in a properly professional spirit.

POSOLOGICAL TABLE: INCLUDING ALL THE OFFICIAL AND THE MOST FREQUENTLY EMPLOYED UNOFFICIAL PREPARATIONS. By CHARLES RICE, chemist, Department of Public Charities and Correction, New York, etc. Revised and approved by members of the Medical Boards of Bellevue and Charity Hospitals. New York, William Wood & Co., 1879, 16mo, pp. 96.

An excellent manual for the druggist's counter or the physician's desk, containing a list of several thousand drugs and preparations, with a few facts in each case regarding preparation, solubility, etc., and adding the dose; with various signs indicating internal or external use, warning against increasing the quantity, etc.

GLEANINGS FROM EXCHANGES.

HYDRATE OF CHLORAL AND BROMIDE OF POTASSIUM ENEMATA IN THE VOMITING OF PREGNANCY.—Dr. D. B. Simmons, of Yokohama, again calls attention to this method of treatment. Further experience still more impresses him with its usefulness. The amount of each drug and the frequency of its administration depend on individual susceptibility to its influence, but in general the dose of twenty to thirty grains of each dissolved in gum-water may be injected, at short intervals, until a moderate degree of narcotism is produced.—*American Journal of Obstetrics*, April, 1879.

PROPHYLAXIS OF CHOLERA INFANTUM.—Dr. Miller urges, above all, the necessity of keeping infants cool. The cool bath should be employed twice a day always, and during the hot season oftener. If the child is unaccustomed to bathing, frequent sponging with cold water may be practised. The house should be kept as cool as possible, and the child should stay in the coolest room. If the child is threatened or already sick, and its room is not cool, make it cool with pails or tubs of cold water, or even with ice; the temperature can be materially lowered in this way. It is to be remembered that cool air reaches the lungs, which cool water cannot do, and the cooling process is much favored by the peculiar anatomical provisions for bringing the air into almost actual contact with the blood-current.—*American Journal of Obstetrics*, April, 1879.

OBSTINATE CASE OF HICCOUGH CURED BY THE PASSAGE OF AN ŒSOPHAGEAL SOUND.—Dr. E. Barré (*L'Union Méd.*) had a man of 45 under his care, who, as the result of emotion, suffered from a continual and insupportable hiccough. Ether, the bromides, morphia, at first gave temporary relief, only to fail altogether after a time. His general health had failed considerably in consequence of the continual disturbance, when he consulted Dr. Barré, who prescribed at first chloroform, then compression, without effect. At last, on one occasion, he passed an Œsophageal tube. Immediately the patient fainted, but soon recovered, and, by repeated introduction of the sound during a few weeks, was completely cured.—*Chicago Medical Journal and Examiner*, May, 1879.

THE PROPERTIES OF HUMAN INTESTINAL JUICE.—Dr. Demant's experiments lead him to the following conclusions: 1. Human intestinal juice is a clear, thin liquid, of a strong alkaline reaction. 2. The total quantity is not large. The secretion is increased during digestion, but during the night is almost arrested. It is not affected in any way by purgatives (Carlsbad salts, etc.). 3. It does not contain any ferment capable of digesting albumen, and has no action whatever on any kind of protein. 4. It converts starch into grape-sugar, and also changes cane- into grape-sugar, but leaves inulin (which has been recommended for diabetic patients instead of bread) unaltered. 5. It emulsifies fats containing free fatty acids, but not neutral fats in which those acids are combined with glycerine.—*Chl. f. Med. Wissen.; Med. Times and Gaz.*, vol. i., 1879, p. 324.

PRELIMINARY TRACHEOTOMY IN EXCISION OF THE TONGUE.—Mr. Barker advises this to avoid the risk of the passage of blood down the trachea. He alludes to two cases in which this proved fatal, but in the case brought forward the tracheal wound was purposely kept open in order to avoid, as far as possible, the risk of the inhalation of septic matters into

the lung during the earlier part of the after-treatment. This is a real danger. Such operations have been followed by death, the result of septic pneumonia, or even gangrene of the lung. The case brought forward in illustration was one of successful extirpation of the tongue in a man, of 49, suffering from epithelioma.—*Clinical Society, Lancet*, vol. i., 1879, p. 479.

RECOVERY AFTER EVACUATION OF A TRAUMATIC ABSCESS IN BRAIN BY TREPHINING AND INCISION.—Mr. J. W. Hulke gives the case of a boy who, striking his head against a fence, grazed it and was momentarily stunned. He continued to work for seven weeks, during which time he had more or less pain in the forehead; then retching and hemiplegia supervened. The frontal bone was trephined at the seat of injury. A small fissure was recognized in its outer table. The dura mater seemed healthy. An aspirator trocar being pushed into the brain, pus rose into the syringe. The abscess was opened through the membranes with a knife, and in all about three drachms of pus were let out. The patient recovered, but lost the sight of both eyes by optic neuritis. Mr. Hulke insists upon the value of hemiplegia, as significant of disease in the brain rather than of arachnitis.—*British Medical Journal*, vol. i., 1879, p. 388.

INTRAVENOUS INJECTION OF AMMONIA.—Dr. Gasper Griswold communicates the results of his investigations as follows. 1. The intravenous injection of ammonia is a prompt and powerful means of stimulation, acting efficiently where other measures are of no avail. 2. No bad consequences follow its employment. The cases given are very striking as to the use of this remedy in desperate cases. The amount was half a drachm to a drachm of the official aqua ammoniæ, containing ten per cent. of the gas, mixed with an equal part of water, and injected into the radial, median, cephalic, or other veins.—*N. Y. Med. Record*, June 7, 1879.

JABORANDI IN WHOOPING-COUGH.—Dr. De Cailhol being called to see a stout boy five years of age, who was in a violent paroxysm of whooping-cough, with dry skin, a pulse of 140, and a temperature of 104°, gave the following treatment. Into two ounces of water he put sixty drops of the fluid extract of jaborandi, and of this a teaspoonful (four drops of the fluid extract) was given every fifteen minutes until one-half was gone. An hour or so later Dr. De Cailhol revisited his little patient and found him perspiring freely. He had already vomited large quantities of mucus, and was still vomiting; temperature and pulse quite normal. The doctor remained for nearly an hour with the child on account of the vomiting being so persistent, and during that time he did not cough once. When he left, the child was sleeping soundly. The next day he was much better, and made a rapid recovery.—*St. Louis Clin. Record*, May, 1879.

HYPODERMIC USE OF COLCHICINE IN RHEUMATISM.—The solubility of colchicine in water renders it very applicable for hypodermic use. Dr. Badia, a Spanish physician, has communicated a number of successful results of its employment in this way in chronic rheumatism, and these have induced Dr. Heyfelder, of St. Petersburg, to try it in a series of cases, with results, on the whole, gratifying. In rheumatic joint affections, and particularly in ischiagra, two milligrammes ($\frac{1}{3}$ gr.) were injected in fifteen drops of water, and the effect was remarkable in lessening the pain and increasing the mobility of the joint. The first result of the injection is a severe burning pain, which rarely lasts over an hour. In some cases there was local tenderness, and occasionally local inflammatory reaction of varying degrees at the place of injection. Increased diuresis and strangury were noticed in a few cases. In persons with sensitive skin, caution must be used and the dose diminished. When local inflammatory phenomena are present, the remedy should be discontinued or applied at some distance. —*N. Y. Med. Jour.*, 1879, p. 661; from *Berlin. Klin. Wochens.*

REMEDIES FOR HICCUP.—According to the *Lyon Médicale*, Dr. Grellety has observed that hiccup in children was immediately stopped by giving them a lump of sugar saturated with table vinegar. The same remedy was tried on adults, with similar instantaneous success.

MISCELLANY.

PHYSICAL EXAMINATION OF SEAMEN OF THE MERCANTILE MARINE.—By a recent circular of the Marine Hospital Service, information is conveyed that, upon application of any United States Shipping Commissioner, or of the master or owner of any vessel in the foreign trade or passenger steamer engaged in the coasting trade, the medical officers of the Marine Hospital Service will examine, physically, any seaman, and give a certificate as to his fitness or otherwise. As a record of these examinations will be kept, this plan is likely to prove beneficial to science as well as to the merchant marine.

THE GENTLE VIVISECTIONIST is likely to find his pursuit rendered more difficult in Germany than it has been heretofore, since we learn from the *Nation* that anti-vivisection societies have been formed for the purpose of interfering with the practice. We learn also, however, that the "hypocritical vivisector" has thus far eluded pursuit, by feigning humanitarianism and getting himself chosen president of the "anti-cruelty societies."

DR. TILBURY FOX, the distinguished dermatologist, died, quite suddenly, in Paris, a few weeks since. It is said his practice, which was entirely confined to diseases of the skin, yielded him between twenty and thirty thousand dollars a year.

The Medical Service of the British Army has proved unequal to the demands made upon it by the various wars now in progress. No fewer than forty "volunteers" have been enlisted, at a pound a day, for the Zulu campaign.

THE PLAGUE.—Intelligence has been received at St. Petersburg from Tiflis that a disease with terrible mortality is raging in ten villages in the Caucasus.

Two English medical students recently committed suicide. The cause in both cases was excessive nervous tension resulting from overwork in preparing for examinations.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 15 TO JUNE 28, 1879.

WOLVERTON, W. D., MAJOR AND SURGEON.—Granted leave of absence for four months. S. O. 140, A. G. O., June 13, 1879.

O'REILLY, R. M., CAPTAIN AND ASSISTANT-SURGEON.—The leave of absence granted him from Headquarters, Department of the South, May 28, 1879, extended one month. S. O. 24, Division of the Atlantic, June 25, 1879.

DE HANNE, J. V., CAPTAIN AND ASSISTANT-SURGEON.—Fort Concho, Texas.—Granted leave of absence for one month on Surgeon's certificate of disability, with permission to leave the Department. S. O. 123, Department of Texas, June 12, 1879.

FITZGERALD, J. A., CAPTAIN AND ASSISTANT-SURGEON.—The sick-leave granted him in S. O. 42, February 20, 1879, from A. G. O., extended twelve months on Surgeon's certificate of disability. S. O. 147, A. G. O., June 23, 1879.

HALL, J. D., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from assignment to duty at Fort Griffin, Texas, and to report to the Commanding Officer, Fort Concho, Texas, for duty as Post-Surgeon. S. O. 121, Department of Texas, June 10, 1879.

HAVARD, V., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon, Fort Johnston, N. C., relieving Assistant-Surgeon B. G. Semig, who will comply with S. O. 114, c. s., A. G. O. S. O. 95, Department of the South, June 16, 1879.

ADAIR, GEO. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months and fifteen days. S. O. 145, A. G. O., June 20, 1879.

WILCOX, T. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon, Boise Barracks, Idaho Territory. S. O. 64, Department of the Columbia, June 5, 1879.

TURRILL, H. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for two months. S. O. 148, A. G. O., June 24, 1879.

HALL, WILLIAM R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—When relieved by Assistant-Surgeon Wilcox, to report for duty to Major John Greene, First Cavalry, commanding troops in the field at Camp Winfield Scott, Kititas Valley, W. T. S. O. 64, c. s., Department of the Columbia.

POWELL, J. L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—The order relieving him from duty at Fort Griffin, Texas, and directing him to report at Department Headquarters for further orders, is suspended until further orders. S. O. 130, Department of Texas, June 21, 1879.

DAVIS, WILLIAM B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Temporarily detached from Fort Totten, to repair to Fort Buford, and hold himself in readiness to proceed to Fort Peck, for duty at the supply depot to be established at that place. S. O. 64, Department of Dakota, June 15, 1879.

YEOMANS, A. A., CAPTAIN AND ASSISTANT-SURGEON.—An Army Retiring Board having found him incapacitated for active service, granted leave of absence until further orders on account of disability. S. O. 141, A. G. O., June 14, 1879.